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| BROWN & MICHAELS, PC 400 M & T BANK BUILDING 118 NORTH TIOGA ST ITHACA, NY 14850 | | | LOVEL, KIMBERLY M | |
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| | | | 2167 | |

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/666,601

Applicant(s)

LOBO ET AL.

Examiner

Kimberly Lovel

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2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/19/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Status

1. Claims 1-47 are pending.
2. Claims 1-47 are rejected.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 11/19/2004 was filed after the mailing date of the application on 9/18/2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: item 16 (Fig 1); item 19 (Fig 1); item 42 (Fig 3); item 43 (Fig 3); item 73 (Fig 7); and item 74 (Fig 7). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig 5 and Fig 7. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 - 47 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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MPEP 2106 IV.B.2.(b)

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application.

Claim 1 recites a repository of material property data comprising a plurality of materials property datasets, each dataset being associated with a sample of a material and a test on the sample of the material, each dataset comprising: a) information on the material; b) information on the sample; c) information on the test; and d) at least one result derived from the test on the sample of the material.

In the above limitation, there is no physical transformation being claimed, a practical application would be established by a useful, concrete and tangible result.

For it to be a tangible result, it must be more than a thought or a computation and must have a real world value rather than being an abstract idea. The invention as recited in the claim just merely states information in the repository. It is unclear as to what kind of tangible output is obtained by these limitations. Claim 2-14 are dependent on claim 1 and therefore are rejected on the same grounds.

Claim 15 recites a method of managing material property data comprising the steps of: a) storing material property data in a repository comprising a plurality of

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materials property datasets, each dataset: i) being created by a data provider; ii) having at least one owner; iii) being associated with a sample of a material and a test on the sample of the material; and iv) comprising: a) information on the material; b) information on the sample; c) information on the test; and d) at least one result derived from the test on the sample of the material; b) providing at least one data owner with access to at least one dataset in the repository; and c) providing at least one data user with access to at least one dataset in the repository.

In the above limitation, there is no physical transformation being claimed, a practical application would be established by a useful, concrete and tangible result.

For it to be a tangible result, it must be more than a thought or a computation and must have a real world value rather than being an abstract idea. The invention as recited in the claim just merely states a method of providing the repository a data provider, an owner and a user information in the repository. It is unclear as to what kind of tangible output is obtained by these limitations. Claim 16-47 are dependent on claim 15 and therefore are rejected on the same grounds.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 13-14 rejected under 35 U.S.C. 102(e) as being anticipated by
US PGPub 2005/0131861 to Arritt et al (hereafter Arritt et al).

Claim 1:

Referring to claim 1, Arritt et al disclose a repository of material property data comprising a plurality of materials property datasets, each dataset being associated with a sample of a material and a test on the sample of the material (see [0008]), each dataset comprising:

- a) information on the material (see [0025], lines 1-3 and [0029], line 12 – type of material, material code, material limits and material supplier);
- b) information on the sample (see [0024], lines 12-19);
- c) information on the test (see [0037], lines 1-9 and [0024], lines 4-5 – the operator's name and department affiliation are considered to represent *test source information*; the identity of the instrument is considered to also represent *test source information*); and

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d) at least one result derived from the test on the sample of the material (see [0037], lines 1-3 – the data measured by the instrumentation is considered to represent the *result derived from the test*).

Claim 2:

Referring to claim 2, Arritt et al disclose the repository of claim 1, in which the information on the material comprises at least one data element selected from a list comprising material name, material class, one or more material subclasses, material supplier (see [0029], line 12), and material composition for composite materials.

Claim 3:

Referring to claim 3, Arritt et al disclose the repository of claim 1, in which the information on the sample comprises at least one data element selected from a list comprising a sample identification, a sample description, a sample size, a sample source and a sample type (see [0024], lines 12-19 – *sample identification, sample source and sample type*).

Claim 4:

Referring to claim 4, Arritt et al disclose the repository of claim 1, in which the information on the test comprises at least one data element selected from a list comprising a description of test method, test parameters, and test source information (see [0037], lines 1-9 and [0024], lines 4-5 – the operator's name and department affiliation are considered to represent *test source information*; the identity of the instrument is considered to also represent *test source information*).

Claim 13:

Referring to claim 13, Arritt et al disclose the repository of claim 1, in which each of the datasets has an owner (see [0037], lines 6-11 – the operator is considered to represent the *owner*).

Claim 14:

Referring to claim 14, Arritt et al disclose the repository of claim 13, in which each of the datasets further comprises information about the owner (see [0037], lines 6-11 – the operator data is considered to represent *information about the owner*).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2005/0131861 to Arritt et al as applied to claim 1 above, and further in view of the dissertation titled "Pulsed DC Reactive Magnetron Sputtering of Aluminum Nitride Thin Films" by Jung Won Cho (hereafter Cho).

Claim 5:

Referring to claim 5, Arritt et al teach a repository of material property data comprising a plurality of materials property datasets, each dataset being associated with a sample of a material and a test on the sample of the material. However, Arritt et al fail to teach the further limitation of the repository storing information in the form of instances with associated metadata. Cho discloses the setup and execution of an experiment on a sample of a material. In particular, Cho discloses a repository similar to that of claim 1, in which the information is stored in the form of instances with associated metadata (see page 36, Table 1-2 – the instances are represented by the type of Crystal and the measurement values and the metadata are Crystal and the units of measurement).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Cho's display of tables of material properties and results of a sample as tables located in the repository of Arritt et al. One would have been motivated to do so in order to display examples of the information located in repository of Arritt et al (Arritt et al: see [0010]).

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Claim 6:

Referring to claim 6, the combination of Arritt and Cho (hereafter Arritt/Cho) teaches the repository of claim 5, in which the instances comprise at least one value, each value being associated with metadata giving information about the value (Cho: see page 36, Table 1-2 – the property data for Diamond is 20.0 and the associated metadata of $k(W/cmK)$ notes the units of measurement).

Claim 7:

Referring to claim 7, Arritt/Cho teaches the repository of claim 6, in which the metadata comprises at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value (Cho: see page 36, Table 1-2 – the metadata $k(W/cmK)$ notes the units of measurement).

Claim 8:

Referring to claim 8, Referring to claim 5, Arritt et al teach a repository of material property data comprising a plurality of materials property datasets, each dataset being associated with a sample of a material and a test on the sample of the material.

However, Arritt et al fail to teach the further limitation of the result comprises an instance of at least one data element selected from a list comprising a single data point, an equation, a graph, a data array, and a picture. Cho discloses the setup and execution of an experiment on a sample of a material. In particular, Cho discloses a repository similar to that of claim 1, in which the result comprises an instance of at least one data element selected from a list comprising a single data point, an equation, a graph, a data

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array, and a picture (see page 153, Table 5.3 – the results of ohmic heating for 10 mT Ar plasma, 0.25 A is 10.8 which is considered to represent a single data point).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Cho's display of tables of results of tests of a sample as tables located in the repository of Arritt et al. One would have been motivated to do so in order to display examples of the information located in repository of Arritt et al (Arritt et al: see [0010]).

Claim 9:

Referring to claim 9, Arritt et al teach a repository of material property data comprising a plurality of materials property datasets, each dataset being associated with a sample of a material and a test on the sample of the material. However, Arritt et al fail to teach the further limitation of the repository storing the results in the form of instances with associated metadata. Cho discloses the setup and execution of an experiment on a sample of a material. In particular, Cho discloses a repository similar to that of claim 1, in which the results are stored in the form of instances with associated metadata (see page 153, Table 5-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Cho's display of tables of the results of a sample as tables located in the repository of Arritt et al. One would have been motivated to do so in order to display examples of the information located in repository of Arritt et al (Arritt et al: see [0010]).

Claim 10:

Referring to claim 10, Arritt/Cho teaches the repository of claim 9, in which the instances comprise at least one value, each value being associated with metadata giving information about the value (Cho: see page 153, Table 5-3 – a value of ohmic heating for 10 mT Ar plasma, 0.25 A is 10.8 MHz; MHz is considered to represent the metadata).

Claim 11:

Referring to claim 11, Arritt/Cho teaches the repository of claim 10, in which the metadata comprises at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value (Cho: see page 153, Table 5-3 – a value of ohmic heating for 10 mT Ar plasma, 0.25 A is 10.8 MHz; the *metadata* of MHz is considered to *units*).

Claim 12:

Referring to claim 12, Arritt/Cho teaches the repository of claim 11, in which results that share common defining parameters are grouped to display the effect of the defining parameters on the result (Cho: see page 151, Table 5-2 – the defining parameters are 10mT of Ar plasma and 28mT of Ar/N2 mixture).

9. Claims 15-19, 21-26, 28-30, 34-38, and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2005/0131861 to Arritt et al in view of US PGPub 2003/0069795 to Boyd et al (hereafter Boyd et al).

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Claim 15:

Referring to claim 5, Arritt et al disclose a method of managing material property data. In particular, Arritt et al disclose a method of managing material property data comprising the steps of:

- a) storing material property data in a repository comprising a plurality of materials property datasets (see [0010]), each dataset:
 - i) being created by a data provider (see [0035]-[0037] – the operator of the instrumentation is considered to represent the data provider);
 - ii) having at least one owner;
 - iii) being associated with a sample of a material and a test on the sample of the material (see [0010 and [0024], lines 12-19); and
 - iv) comprising:
 - a) information on the material (see [0025], lines 1-3 and [0029], line 12 – type of material, material code, material limits and material supplier);
 - b) information on the sample (see [0024], lines 12-19);
 - c) information on the test (see [0037], lines 1-9 and [0024], lines 4-5 – the operator's name and department affiliation are considered to represent *test source information*; the identity of the instrument is considered to also represent *test source information*); and
 - d) at least one result derived from the test on the sample of the material (see [0037], lines 1-3 – the data measured by the instrumentation is considered to represent the *result derived from the test*);

b) providing at least one data owner with access to at least one dataset in the repository; and

c) providing at least one data user with access to at least one dataset in the repository.

However, Arritt et al do not explicitly teach the further limitations of (a) wherein each dataset has at least one owner; of (b) or of (c). Boyd et al teach a supplier data management system for materials including a database (see abstract). In particular, Boyd discloses

a) storing material property data in a repository comprising a plurality of materials property datasets (see [0009] and [0021]), each dataset:

ii) having at least one owner (see [0021]-[0023] – the raw material supplier is considered to represent the *data owner*);

b) providing at least one data owner with access to at least one dataset in the repository (see [0022] – the supplier has access to the data on the particular materials which they supply); and

c) providing at least one data user with access to at least one dataset in the repository (see [0009] – the manufacturer is considered to represent the *data user*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Cho's display of tables of the results of a sample as tables located in the repository of Arritt et al. One would have been motivated to do so in order to display examples of the information located in repository of Arritt et al (Arritt et al: see [0010]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use database of Arritt et al as a subcomponent to Boyd et al's method of managing supplier data. One would have been motivated to do so in order to decrease the difficulties of tracking the components of the materials (Arritt et al: see [0005]-[0007]).

Claim 16:

Referring to claim 16, the combination of Arritt et al and Boyd et al (hereafter Arritt/Boyd) teaches the method of claim 15, in which the materials property datasets are created by the data provider by the steps of:

specifying generic information about the material including at least one of the class, subclass, terms that are commonly associated with the material, notes about the material (Boyd et al: see [0022] and [0024] – raw material properties, batch information, information about shipping, material ID), generic physical attributes such as shape and form, the component materials of the material and their relationship within the material;

performing preliminary validation checks as to whether the information for the material already exists (Boyd et al: see [0024] – each raw material consists of one code which allows for a validation check to see if information has previously entered);

perform preliminary validation checks regarding the structure of the data (Boyd et al: see [0024], lines 9-13);

if the dataset passes the checks, entering the dataset into the repository (Boyd et al: see [0024]).

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Claim 17:

Referring to claim 17, Arritt/Boyd teaches the method of claim 16, in which the data provider specifies the dataset by submitting documents, each of which represent the results of the measurements (Boyd et al: see [0021], lines 5-16).

Claim 18:

Referring to claim 18, Arritt/Boyd teaches the method of claim 17, in which the documents are submitted interactively using a form over a computer network (Boyd et al: see [0021], lines 5-12 – a spreadsheet).

Claim 19:

Referring to claim 19, Arritt/Boyd teaches the method of claim 17, in which the documents are submitted from a computer program (Boyd et al: see [0021]; Fig 1, item 26; and Fig 2, item 10).

Claim 21:

Referring to claim 21, Arritt/Boyd teaches the method of claim 15, in which the information on the material in at least one dataset further comprises a nomenclature of the material, and the dataset further comprises an identification of a material vendor, the method further comprising the step of providing the material vendor with access to the dataset for maintenance of the nomenclature (Boyd et al: see [0009] – the supplier transmits the raw materials property data to the database of the manufacturer).

Claim 22:

Referring to claim 22, Arritt/Boyd teaches the method of claim 21, in which the nomenclature is selected from a list comprising class, sub-class and general physical attributes (Boyd et al: see [0019], lines 7-13).

Claim 23:

Referring to claim 23, Arritt/Boyd teaches the method of claim 15, in which the step of providing the data owner with access to at least one dataset in the repository comprises the steps of:

presenting the data owners with a list summarizing the data that they own, each item in the list possessing sufficient information for the owner to identify the property, the information being at least one of the name of the material, the name of the property, the date of measurement, identification of the specimen sample as obtained from the data provider and an identification of the test as obtained from the data provider (Boyd et al: see [0022], lines 17-19); and

presenting the owner is with a hyperlink which would lead to the display of an overview and details of all results of the test (Boyd et al: see [0022], lines 12-15 – the user selects the material type from the menu).

Claim 24:

Referring to claim 24, Arritt/Boyd teaches the method of claim 23, further comprising the step of allowing the owner to narrow down the list to data which represent the same test or property data for the same sample (Boyd et al: see [0023] –

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selecting which specification to use when there is more than one is considered to represent narrowing down the data by property data for the same sample).

Claim 25:

Referring to claim 25, Arritt/Boyd teaches the method of claim 15, in which the step of providing the data user with access to at least one dataset in the repository comprises the steps of:

- allowing the user to indicate any requirements on class, subclasses or suppliers of material (Arritt et al: see [0027]);

- allowing the user to indicate properties sought (Arritt et al: see [0027]);

- presenting a set of materials with their properties (Arritt et al: see [0027]);

- allowing the user to select at least one material and property from the set (Arritt et al: see [0027]); and

- displaying a summary and details of the set of datasets for the specified material and property (Arritt et al: see [0039] – a generated report).

Claim 26:

Referring to claim 26, Arritt/Boyd discloses the method of claim 15, in which at least some of the datasets in the repository further comprise data representing permitted user access privileges, and the step of providing a user with access to the repository comprises the step of comparing the user's access privileges to the data representing permitted user access privileges, and denying access to a dataset if the user's access privileges are not sufficient to access the dataset (Boyd et al: see [0022] –

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the user enters their identifying ID and password and then is only shown data in which the ID matches the requirements).

Claim 28:

Referring to claim 28, Arritt/Boyd discloses the method of claim 15, in which the step of providing the data user with access to at least one dataset in the repository comprises the steps of:

- allowing the user to indicate any requirements on class, subclasses or suppliers of material (Arritt et al: see [0027]);

- allowing the user to indicate restrictions on values of results (Arritt et al: see [0027]);

- presenting a set of materials with their properties which conform to the restrictions (Arritt et al: see [0027]);

- allowing the user to select at least one material and property from the set (Arritt et al: see [0027]); and

- displaying a summary and details of the set of datasets for the specified material and property (Arritt et al: see [0039] – a generated report).

Claim 29:

Referring to claim 29, Arritt/Boyd teaches the method of claim 15, in which the step of providing the data user with access comprises the step of providing data in a format which is understandable by a selected computer program or application (Boyd et al: see [0031]).

Claim 30:

Referring to claim 30, Arritt/Boyd teaches the method of claim 29, in which the repository further stores information describing the format which is understandable by a selected computer program or application (Boyd et al: see [0031]).

Claim 34:

Referring to claim 34, Arritt/Boyd teaches the method of claim 15, in which the information on the material comprises at least one data element selected from a list comprising material name, material class, one or more material subclasses, material supplier (Arritt et al: see [0029], line 12), and material composition for composite materials.

Claim 35:

Referring to claim 35, Arritt/Boyd teaches the method of claim 15, in which a data life cycle of at least one dataset is controlled by the step of permitting at least one user to activate, inactivate, deprecate and discard the dataset (Arritt et al: see [0023] and [0027]).

Claim 36:

Referring to claim 36, Arritt/Boyd teaches the method of claim 35, further comprising the step of providing any user with a review of any active dataset upon request (Arritt et al: see [0027]).

Claim 37:

Referring to claim 37, Arritt/Boyd teaches the method of claim 15, in which the information on the sample comprises at least one data element selected from a list comprising a sample identification, a sample description, a sample size, a sample source and a sample type (Arritt et al: see [0024], lines 12-19 – *sample identification, sample source and sample type*).

Claim 38:

Referring to claim 38, Arritt/Boyd teaches the method of claim 15, in which the information on the test comprises at least one data element selected from a list comprising a description of test method, a standards body specifying the test, test parameters, and test source information (Arritt et al: see [0037], lines 1-9 and [0024], lines 4-5 – the operator's name and department affiliation are considered to represent *test source information*; the identity of the instrument is considered to also represent *test source information*).

Claim 46:

Referring to claim 46, Arritt/Boyd teaches the method of claim 15, in which each of the datasets further comprises information about the owner (Boyd et al: see [0022] and [0045]).

Claim 47:

Referring to claim 47, Arritt/Boyd teaches the method of claim 15, further comprising the step of providing at least one data owner with means to monitor usage of at least one dataset (Boyd et al: see [0022] – the network and the interface provides the means).

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2005/0131861 to Arritt et al in view of US PGPub 2003/0069795 to Boyd et al as applied to claim 19 above, and further in view of US PGPub 2004/0243580 to Markki et al (hereafter Markki et al).

Claim 20:

Referring to claim 20, Arritt/Boyd teaches a method in which documents are submitted by the computer program using SOAP protocol. However, Arritt/Boyd fails to explicitly teach the further limitation in which the documents are submitted by the computer program using SOAP protocol. Markki et al teach a method of submitting documents, including the further limitation. In particular, Markki et al teach a method similar to that of claim 19, in which the documents are submitted by the computer program using SOAP protocol (Markki et al: see [0169]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Markki et al's method of submitting documents using SOAP protocol with Arritt/Boyd's method for submitting documents as a precautionary

measure. One would have been motivated to do so in order to reduce the amount of required overhead and additional software (Arritt et al: see [0007]).

11. Claims 27 and 31-33 rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2005/0131861 to Arritt et al in view of US PGPub 2003/0069795 to Boyd et al as applied respectively to claims 26 and 15 above, and further in view of US Patent No 6,484,173 to O'Hare et al.

Claim 27:

Referring to claim 27, Arritt/Boyd teach a method in which at least some of the datasets in the repository further comprise data representing permitted user access privileges, and the step of providing a user with access to the repository comprises the step of comparing the user's access privileges to the data representing permitted user access privileges, and denying access to a dataset if the user's access privileges are not sufficient to access the dataset. However, Arritt/Boyd fails to explicitly teach the further limitations of presenting the user with a form to request access to the dataset, accepting the form from the user, notifying the data owner of the request for access, along with basic identification and contact information about the requesting user, allowing the data owner to accept or reject the request and if the data owner accepts the request, updating the data access privileges in the dataset to permit access by the user. O'Hare et al teaches a method for controlling access to a storage device (see abstract). In particular, O'Hare et al teach a method similar to that of claim 26, further comprising the steps, after the step of denying access, of:

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presenting the user with a form to request access to the dataset (see column 3, lines 23-47 – the screen to enter user ID and password is considered to represent the form);

accepting the form from the user (see column 3, lines 23-47);

notifying the data owner of the request for access, along with basic identification and contact information about the requesting user;

allowing the data owner to accept or reject the request (see column 2, lines 50-67 and column 3, lines 23-47);

if the data owner accepts the request, updating the data access privileges in the dataset to permit access by the user (see column 2, lines 31-35 and column 3, lines 23-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use O'Hare et al's method of controlling access to a storage device with the management system of Arritt/Boyd. One would have been motivated to do so in order to limit user access and increase the security of the information stored in the database (Boyd et al: see [0008], lines 11-17).

Claim 31:

Referring to claim 30, Arritt/Boyd teaches a method for managing material property data. However, Arritt/Boyd fails to explicitly teach the further limitation of in which there are a plurality of data users and a plurality of domains, and at least one domain administrator associated with at least one domain, and the method further comprises the steps of: the domain administrator assigning at least some of the plurality

of users to at least one domain, the domain administrator setting policies for access of at least one dataset by the users assigned to the domain. O'Hare et al teach a method for controlling access to a storage device (see abstract). In particular, O'Hare et al disclose a method similar to that of claim 15, in which there are a plurality of data users and a plurality of domains, and at least one domain administrator associated with at least one domain, and the method further comprises the steps of:

the domain administrator assigning at least some of the plurality of users to at least one domain (O'Hare et al: see column 10, lines 41-56),

the domain administrator setting policies for access of at least one dataset by the users assigned to the domain (O'Hare et al: see column 10, lines 41-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use O'Hare et al's method of controlling access to a storage device with the management system of Arritt/Boyd. One would have been motivated to do so in order to limit user access and increase the security of the information stored in the database (Boyd et al: see [0008], lines 11-17).

Claim 32:

Referring to claim 32, the combination Arritt/Boyd and O'Hare et al (hereafter Arritt/Boyd/O'Hare) teaches the method of claim 31, in which the domains are a company or a division of the company (O'Hare et al: see column 10, lines 41-56 – a workgroup is considered to represent a division of a company).

Claim 33:

Referring to claim 33, Arritt/Boyd/O'Hare teaches the method of claim 31, further comprising the step of permitting the domain administrator to assign at least one domain to at least one other domain (O'Hare et al: see column 10, lines 41-56).

12. Claims 39-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2005/0131861 to Arritt et al in view of US PGPub 2003/0069795 to Boyd et al as applied to claim 15 above, and further in view of the dissertation titled "Pulsed DC Reactive Magnetron Sputtering of Aluminum Nitride Thin Films" by Jung Won Cho.

Claim 39:

Referring to claim 35, Arritt/Boyd teaches a method of managing property data. However, Arritt/Boyd fails to teach the further limitation of the repository storing information in the form of instances with associated metadata. Cho discloses the setup and execution of an experiment on a sample of a material. In particular, Cho discloses a method similar to that of claim 15, in which the information is stored in the form of instances with associated metadata (see page 36, Table 1-2 – the instances are represented by the type of Crystal and the measurement values and the metadata are Crystal and the units of measurement).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Cho's display of tables of material properties and results of a sample as tables located in the repository of Arritt/Boyd. One would have been

motivated to do so in order to display examples of the information located in repository of Arritt et al (Arritt et al: see [0010]).

Claim 40:

Referring to claim 40, the combination of Arritt/Boyd and Cho (hereafter Arritt/Boyd/Cho) teaches the method of claim 39, in which the instances comprise at least one value, each value being associated with metadata giving information about the value (Cho: see page 36, Table 1-2 – the property data for Diamond is 20.0 and the associated metadata of k(W/cmK) notes the units of measurement).

Claim 41:

Referring to claim 40, Arritt/Boyd/Cho teaches the method of claim 40, in which the metadata comprises at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value (Cho: see page 36, Table 1-2 – the metadata k(W/cmK) notes the units of measurement).

Claim 42:

Referring to claim 42, Arritt/Boyd teaches a method of managing material property data. However, Arritt/Boyd fails to teach the further limitation of the result comprises an instance of at least one data element selected from a list comprising a single data point, an equation, a graph, a data array, and a picture. Cho discloses the setup and execution of an experiment on a sample of a material. In particular, Cho discloses a method similar to that of claim 15, in which the result comprises at least one data element selected from a list comprising a single data point, an equation, a graph,

and a picture (see page 153, Table 5.3 – the results of ohmic heating for 10 mT Ar plasma, 0.25 A is 10.8 which is considered to represent a single data point).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Cho's display of tables of results of tests of a sample as tables located in the repository of Arritt/Boyd. One would have been motivated to do so in order to display examples of the information located in repository of Arritt et al (Arritt et al: see [0010]).

Claim 43:

Referring to claim 43, Arritt/Boyd teaches a method of managing material property data. However, Arritt/Boyd fails to teach the further limitation of the repository storing the results in the form of instances with associated metadata. Cho discloses the setup and execution of an experiment on a sample of a material. In particular, Cho discloses a method similar to that of claim 15, in which the results are stored in the form of instances with associated metadata (see page 153, Table 5-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Cho's display of tables of the results of a sample as tables located in the repository of Arritt/Boyd. One would have been motivated to do so in order to display examples of the information located in repository of Arritt et al (Arritt et al: see [0010]).

Claim 44:

Referring to claim 44, Arritt/Boyd teaches the method of claim 43, in which the instances comprise at least one value, each value being associated with metadata

giving information about the value (Cho: see page 153, Table 5-3 – a value of ohmic heating for 10 mT Ar plasma, 0.25 A is 10.8 MHz; MHz is considered to represent the metadata).

Claim 45:

Referring to claim 45, Arritt/Boyd teaches the method of claim 44, in which the metadata comprises at least one data element selected from a list comprising data type, limits, acceptable values or ranges, and default value (Cho: see page 153, Table 5-3 – a value of ohmic heating for 10 mT Ar plasma, 0.25 A is 10.8 MHz; the *metadata* of MHz is considered to *units*).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- US Patent No 6,807,542 to Bantz et al titled Method and Apparatus for Selective and Quantitative Rights Management
- US Patent No 6,105,027 to Schneider et al titled Techniques for Eliminating Redundant Access Checking by Access Filters

Contact Information


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kimberly Lovel
Examiner
Art Unit 2167

kml
17 March 2006


SHAHID ALAM
PRIMARY EXAMINER